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(57) Abstract: To gain a better understanding of tumor angiogenesis endothelial cells (Ecs) were isolated and gene expression patterns were evaluated. When transcripts from Ecs derived from normal and malignant colorectal tissues were compared with transcripts from non-endothelial cells, over 170 genes predominantly expressed in the endothelium were identified. Comparison between normal and tumor-derived endothelium revealed differentially expressed genes, including many that were specifically elevated in tumor-associated endothelium. Experiments with representative genes from this group demonstrated that most were similarly expressed in the endothelium of primary lung, breast, brain, and pancreatic cancers as well as in metastatic lesions of the liver. These results demonstrate that neoplastic and normal endothelium in humans are distinct at the molecular level.

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